

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

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Claim Amendments

This listing of the claims will replace all prior versions,
and listings, of claims in the application:

Claim 1 (currently amended): A honeycomb body, comprising:

a casing tube;

a honeycomb structure connected to said casing tube and
defining an axial portion between said casing tube and said
honeycomb structure;

an inner sleeve at least partially surrounding said honeycomb
structure;

an outer sleeve at least partially surrounding said honeycomb
structure;

said inner and outer sleeves being disposed in said axial
portion; and

said sleeves having structures for compensation of changes in
circumference of said honeycomb structure, said structures of

Applic. No. 10/762,151
Am dt. dated June 29, 2007
Reply to Office action of April 13, 2007

said inner sleeve and said structures of said outer sleeve
engaging in one another and adjacent structures of said
sleeves bearing at least partially against one another; and

a plurality of joining locations adjacently interconnecting
said honeycomb structure, said inner and outer sleeves and
said casing tube to form an open spring/damper system from at
least one of said sleeves.

Claim 2 (original): The honeycomb body according to claim 1,
wherein said honeycomb structure is connected to said casing
tube by technical joining.

Claim 3 (original): The honeycomb body according to claim 1,
wherein at least one of said sleeves has structures for
compensation of changes in circumference of said honeycomb
structure.

Claim 4 (cancelled).

Claim 5 (original): The honeycomb body according to claim 3,
wherein said structures are formed by corrugations in said
sleeves, and adjacent joining locations of at least two of
said structures are spaced apart from one another.

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

Claim 6 (original): The honeycomb body according to claim 1, wherein said inner sleeve is connected to said honeycomb structure over an entire circumference of said honeycomb structure.

Claim 7 (original): The honeycomb body according to claim 1, wherein said inner sleeve is brazed to said honeycomb structure over an entire circumference of said honeycomb structure.

Claim 8 (original): The honeycomb body according to claim 1, wherein said plurality of joining locations include inner joining locations between said inner and outer sleeves and outer joining locations between said outer sleeve and said casing tube, being distributed uniformly over a circumference of said honeycomb structure, and directly adjacent inner and outer joining locations are mutually offset in circumferential direction.

Claim 9 (original): The honeycomb body according to claim 1, wherein at least one of said inner and outer sleeves has a sleeve thickness smaller than 0.3 mm.

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

Claim 10 (original): The honeycomb body according to claim 1, wherein at least one of said inner and outer sleeves has a sleeve thickness smaller than 0.2 mm.

Claim 11 (currently amended): The honeycomb body according to claim 8, wherein at least one of said inner locations together and outer joining locations together have an extent in circumferential direction of less than 30% of a circumference of said honeycomb structure.

Claim 12 (currently amended): The honeycomb body according to claim 8, wherein at least one of said inner locations together and outer joining locations together have an extent in circumferential direction of less than 20% of a circumference of said honeycomb structure.

Claim 13 (original): The honeycomb body according to claim 8, wherein said inner and outer joining locations are mutually offset in axial direction of said honeycomb structure.

Claim 14 (original): The honeycomb body according to claim 1, wherein said axial portion has a length of between 40% and 100% of an axial dimension of the honeycomb body.

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

Claim 15 (original): The honeycomb body according to claim 1, wherein said honeycomb structure has sheet metal layers being at least partially structured to form channels through which an exhaust gas can flow.

Claim 16 (original): The honeycomb body according to claim 15, wherein said honeycomb structure has a channel density of at least 800 cpsi, and said sheet metal layers have sheets with a sheet thickness smaller than 0.025 mm.

Claim 17 (original): The honeycomb body according to claim 3, wherein at least one of said joining locations and said structures seal-off an annular gap between said casing tube and said honeycomb structure for an exhaust gas flowing through the honeycomb body.

Claim 18 (original): The honeycomb body according to claim 1, wherein at least one of said inner sleeve and said outer sleeve is one of at least two mutually axially spaced apart sleeves.

Claim 19 (original): The honeycomb body according to claim 1, wherein at least one of said inner sleeve and said outer sleeve has at least one microstructure.

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

Claim 20 (currently amended): A catalyst carrier body, comprising:

a casing tube;

a honeycomb structure for carrying catalytic material for purifying an exhaust gas of an internal combustion engine, said honeycomb structure connected to said casing tube and defining an axial portion between said casing tube and said honeycomb structure;

an inner sleeve at least partially surrounding said honeycomb structure;

an outer sleeve at least partially surrounding said honeycomb structure;

said inner and outer sleeves being disposed in said axial portion; and

said sleeves having structures for compensation of changes in circumference of said honeycomb structure, and said structures of said inner sleeve and said structures of said outer sleeve engaging in one another and adjacent structures of said sleeves bearing at least partially against one another; and

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

a plurality of joining locations adjacently interconnecting said honeycomb structure, said inner and outer sleeves and said casing tube to form an open spring/damper system from at least one of said sleeves.

Claim 21 (withdrawn-currently amended): A method for producing a honeycomb body according to claim 1, which comprises the following steps:

producing sleeve blanks;

forming inner joining locations between the sleeve blanks;

winding the sleeve blanks into at least one inner sleeve and at least one outer sleeve;

connecting ends of the sleeve blanks;

introducing the at least one inner sleeve and the at least one outer sleeve into a casing tube;

introducing a honeycomb structure into the inner sleeve; and

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

forming other joining locations interconnecting the honeycomb structure, the at least one inner sleeve, the at least one outer sleeve and the casing tube to form an open spring/damper system from at least one of the sleeves.

Claim 22 (withdrawn): The method according to claim 21, which further comprises initially jointly calibrating at least two of the sleeve blanks before the step of forming the inner joining locations.

Claim 23 (withdrawn): The method according to claim 21, which further comprises carrying out the step of forming the inner joining locations with a welding method.

Claim 24 (withdrawn): The method according to claim 21, which further comprises carrying out the step of forming the inner joining locations with a welding method selected from the group consisting of rolled-seam welding and laser welding.

Claim 25 (withdrawn): The method according to claim 21, which further comprises carrying out the step of connecting the ends of the sleeve blanks with a welding method.

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

Claim 26 (withdrawn): The method according to claim 25, which further comprises selecting the welding method from the group consisting of rolled-seam welding and laser welding.

Claim 27 (withdrawn): The method according to claim 21, which further comprises providing the at least one outer sleeve with brazing foil, before introducing the at least one outer sleeve into the casing tube, for the formation of outer joining locations.

Claim 28 (withdrawn): The method according to claim 21, which further comprises providing the periphery of the honeycomb structure with a passivation, starting from one end face, through an offset, before the step of introducing the honeycomb structure into the inner sleeve.

Claim 29 (withdrawn): The method according to claim 21, which further comprises subsequently bringing the joined-together honeycomb structure, casing tube, at least one inner sleeve and at least one outer sleeve into contact with at least one of an adhesive and a brazing powder, and then producing at least one of at least one tie-up and at least one outer joining location by thermal treatment.

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

Claim 30 (withdrawn): The method according to claim 29, which further comprises carrying out the step of bringing the joined-together honeycomb structure, casing tube, at least one inner sleeve and at least one outer sleeve into contact, from one end face of the honeycomb structure.

Claim 31 (withdrawn): The method according to claim 29, which further comprises carrying out the thermal treatment as a high-temperature vacuum brazing process.

Claim 32 (withdrawn-currently amended): A method for producing a catalyst carrier body according to claim 20, which comprises the following steps:

producing sleeve blanks;

forming inner joining locations between the sleeve blanks;

winding the sleeve blanks into at least one inner sleeve and at least one outer sleeve;

connecting ends of the sleeve blanks;

introducing the at least one inner sleeve and the at least one outer sleeve into a casing tube;

Applic. No. 10/762,151
Amdt. dated June 29, 2007
Reply to Office action of April 13, 2007

introducing a honeycomb structure, for carrying catalytic material for purifying an exhaust gas of an internal combustion engine, into the inner sleeve; and

forming other joining locations interconnecting the honeycomb structure, the at least one inner sleeve, the at least one outer sleeve and the casing tube to form an open spring/damper system from at least one of the sleeves.